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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/631,723	08/03/2000	Richard Louis Arndt	AUS9-2000-0316-US1	9219

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EXAMINER	
LEE, CHRISTOPHER E	

ART UNIT	PAPER NUMBER
2112	

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13

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/631,723	ARNDT ET AL.	
	Examiner	Art Unit	
	Christopher E. Lee	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Receipt Acknowledgement

1. Receipt is acknowledged of the Amendment filed on 9th of December 2003. Claims 1, 8 and 15 have been amended; no claim has been canceled; and no claim has been newly added since the last Office Action was mailed on 17th of September 2003. Currently, claims 1-21 are pending in this application.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 3, 8, 10, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Berglund et al. [US 6,044,411; hereinafter Berglund].

Referring to claims 8 and 15, Berglund discloses a computer program product (i.e., firmware in SPCN 109 and OS in Fig. 1A) in a computer readable media (i.e., SPCN local memory and system memory for OS in Fig. 1) for use in a data processing system (e.g., CEC 101 and enclosures 103 and 105 in Fig. 1A-C) for managing input/output drawers (See col. 1, lines 9-12) within said data processing system, said computer program product comprising: first instructions for assigning (i.e., defining) a unique identifier (i.e., unique physical location address; See col. 7, lines 40-44 and 47) to each of a plurality of input/output drawers (i.e., backplane 113, 113A, 113B1 and 113B2 in Fig. 1A-C); and second instructions for storing (i.e., writing) said unique identifier in memory (See col. 7, lines 44-48); wherein said unique identifier (i.e., unique physical location address) is used by an operating system to identify said plurality of input/output drawers regardless of how said input/output drawers are interconnected by cables (See Abstract; i.e., wherein in fact that an operating system uses said stored physical location indication to correlate logical addresses to physical location anticipates said unique identifier is used by an operating system to identify said plurality of input/output drawers (viz., to indicate location of said plurality of input/output drawers) regardless of how said input/output drawers are interconnected by

cables (viz., through said correlation between said input/output drawers and said logical addresses of them; See col. 14, lines 23-26)), such that physical addresses (viz., the subject matter "unit addresses", which is defined in the Application, page 16, lines 15-24; i.e., wherein in fact that the subject matter "physical addresses" should be interpreted as logical addresses since (1) the claim language "physical addresses" has never clearly defined in the original specification, and therefore (2) the subject matter "unit addresses", which is the only one subject matter to be appropriately interpretable as the claimed subject matter "physical addresses", should be understood as logical addresses because a memory mapping is assigning system memory address ranges (viz., physical addresses) so that the unit addresses can be used by the host processors to access I/O devices within the drawer, which is disclosed in the Application, page 17, lines 22-27) used when accessing devices (e.g., PCI slots 1 to 8 for PCI devices) contained within said plurality of input/output drawers (i.e., backplane 113, 113A, 113B1 and 113B2 in Fig. 1A-C) do not change (i.e., logical addresses, which are used by operating system, are not changed even if the unique physical location addresses are changed. Only the mapping between said logical addresses and said unique physical location addresses is changed) when reconfiguring at least one of said plurality of input/output drawers (e.g., one of backplane 113, 113A, 113B1 and 113B2 in Fig. 1A-C) within said data processing system (See col. 7, lines 12+; i.e., wherein in fact that SPCN electronically determines the backplanes in the enclosures and build a mapping of logical address to physical location address for each backplane and its slots anticipates that system firmware dynamically discovers the I/O drawers and assigned memory mapping to each one of drawers and its PHBs. This anticipation supports that the limitation "addresses used when accessing devices contained within said plurality of input/output drawers do not change when reconfiguring at least one of said input/output drawers within said data processing system") by physical insertion, physical removal or physical rearrangement (See col. 10, lines 36-53), wherein said physical addresses that do not change include physical addresses (i.e., logical

addresses) used when accessing devices contained within said reconfigurable drawer(s) (See col. 7, lines 51-63).

Referring to claims 10 and 17, Berglund teaches said first and second instructions are executed in a service processor (See col. 7, lines 40-48).

Referring to claim 1, the method steps of claim 1 are inherently performed by the apparatus of claim 15, and therefore the rejection of claim 15 applies to claim 1.

Referring to claim 3, the method steps of claim 3 are inherently performed by the apparatus of claim 17, and therefore the rejection of claim 17 applies to claim 3.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 2, 5, 9, 12, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berglund [US 6,044,411] as applied to claims 1, 3, 8, 10, 15 and 17 above, and further in view of Sidhu et al. [US 5,884,322; hereinafter Sidhu].

Referring to claims 9 and 16, Berglund, discussed above, discloses all the limitations of the claims 9 and 16, respectively, except that does not teach third instructions, responsive to a determination that a new input/output drawer has been added to said data processing system, for assigning a new unique identifier to said new input/output drawer.

Sidhu discloses a method and apparatus for creating and assigning unique identifiers for network entities and data base items in a networked computer system, wherein third instructions, responsive to a determination (See block 100 in Fig. 4) that a new input/output drawer (i.e., new server entity) has been added (i.e., installed) to said data processing system (i.e., networked computer system 10 of Fig. 1; See col. 10, lines 23-25), for assigning (See block 104 in Fig. 4) a new unique identifier (i.e., unique server identification) to said new input/output drawer (i.e., new server entity; See col. 10, lines 30-31), wherein

said new unique identifier is different from any of said unique identifiers previously assigned (See col. 10, lines 32-35 and col. 11, lines 37-40), such that each of said plurality of input/output drawers (i.e., server entities) maintains the same unique identifier (See col. 10, lines 58-61; i.e., wherein in fact that a server entity (i.e., input/output drawer) assigns a unique identification (i.e., unique identification) from its set of available server identifications and removes the assigned identification from the set implies each of said plurality of input/output drawers (i.e., server entities) maintains the same unique identifier (i.e., the same unique identification)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said third instructions, as disclosed by Sidhu, in said computer program product, as disclosed by Berglund, for the advantage of providing a means for appropriating identifications in a manner which is consistent with input/output drawer use(i.e., network use), thereby reducing the number of unique identifications (i.e., the number of identifications) that remain dormant because of inactivity on said input/output drawer (i.e., the server) which owns those identifications (See Sidhu, col. 4, lines 17-21).

Referring to claims 12 and 19, Berglund teaches said unique identifier (i.e., unique physical location address) comprise device nodes (i.e., unique enclosure addresses) and location codes (i.e., unique backplane addresses). Refer to col. 7, lines 40-44.

Referring to claim 2, the method steps of claim 2 are inherently performed by the apparatus of claim 16, and therefore the rejection of claim 16 applies to claim 2.

Referring to claim 5, the method steps of claim 5 are inherently performed by the apparatus of claim 19, and therefore the rejection of claim 19 applies to claim 5.

6. Claims 4, 6, 7, 11, 13, 14, 18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berglund [US 6,044,411] and Sidhu [US 5,884,322] as applied to claims 2, 5, 9, 12, 16 and 19 above, and further in view of Lortz et al. [US 6,041,364; hereinafter Lortz].

Referring to claims 11 and 18, Berglund, as modified by Sidhu, discussed above, discloses all the limitations of the claims 11 and 18, respectively, except that does not teach said unique identifier and said new unique identifier are stored in a device tree.

Lortz teaches a system for adding a device entry to a device tree upon detecting the connection of a device, wherein said device tree (Fig. 2C) stores unique identifier (address, name and location on Device #1 272 of Fig. 2C) and an added new unique identifier (See col. 6, lines 41-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said device tree, as disclosed by Lortz, in said data processing system, as disclosed by Berglund, as modified by Sidhu, for the advantage of providing a way for associating an input/output drawer (i.e., smart device; Lortz) with particular device driver for said input/output drawer (i.e., software components, device functions, or software categories; Lortz). Refer to Lortz, col. 2, line 55 through col. 3, line 3.

Referring to claims 13 and 20, Lortz discloses said device tree is stored in a system memory (i.e., computer readable medium 240 of Fig. 2A).

Referring to claims 14 and 21, Berglund, as modified by Sidhu, discloses all the limitations of the claims 14 and 21, respectively, except that does not teach fourth instructions for updating a device tree to reflect a configuration of said data processing system after inclusion of said new input/output drawer.

Lortz teaches a system for adding a device entry to a device tree upon detecting the connection of a device, wherein fourth instructions (i.e., device tree search instructions 284 of Fig. 2A) for updating said device tree (i.e., adding to a device tree in Fig. 2C; See col. 6, lines 41-44) to reflect a configuration of

said data processing system (See col. 6, lines 36-60) after inclusion of said new input/output drawer (See col. 6, lines 41-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said device tree with said fourth instructions, as disclosed by Lortz, in said data processing system, as disclosed by Berglund, as modified by Sidhu, for the advantage of providing a way for associating an input/output drawer (i.e., smart device; Lortz) with particular device driver for said input/output drawer (i.e., software components, device functions, or software categories; Lortz). Refer to col. 2, line 55 through col. 3, line 3 of Lortz.

Referring to claim 4, the method steps of claim 4 are inherently performed by the apparatus of claim 18, and therefore the rejection of claim 18 applies to claim 4.

Referring to claim 6, the method steps of claim 6 are inherently performed by the apparatus of claim 20, and therefore the rejection of claim 20 applies to claim 6.

Referring to claim 7, the method steps of claim 7 are inherently performed by the apparatus of claim 21, and therefore the rejection of claim 21 applies to claim 7.

Response to Arguments

7. Applicants' arguments filed on 9th of December 2003 (hereinafter the Response) have been fully considered but they are not persuasive.

8. *In response to the Applicants' argument with respect to* I. 35 U.S.C. §102 Anticipation and II. 35 U.S.C. §103 Obviousness on the Response pages 6 and 7, the Examiner respectfully disagrees. As the Examiner admitted that the physical address location information used for identifying devices by the operating system do change when reconfiguring according to Berglund's invention, the physical addresses in term of computer terminology (viz., addresses of system memory range of the Applicants' invention) are used for identifying devices by the operating system do also change by memory mapping when reconfiguring according to the specification (See Application, page 17, lines 24-27 and the block

504 in Fig. 5). However, the claim language "physical addresses" in the claims 1, 8 and 15 has never clearly defined in the original specification, but the subject matter "unit addresses" in the Application, page 16, lines 15-24, which is the only one subject matter to be appropriately interpretable as the claimed subject matter "physical addresses" in order to make the claimed invention enable, should be understood as logical addresses because a memory mapping is assigning system memory address ranges (viz., physical addresses) so that the unit addresses can be used by the host processors to access I/O devices within the drawer (See Application, page 17, lines 22-27). Thus, the claimed limitations "physical addresses used when accessing devices contained within said plurality of input/output drawers do not change when reconfiguring at least one of said plurality of input/output drawers within the data processing system" could be enabled by the above mentioned interpretation, and these limitations are rejected in the paragraph 3 of the instant Office Action, such that the claims 1, 3, 8, 10, 15 and 17 rejection under 35 U.S.C. 102(e) as being anticipated by Berglund. Thus, the Applicants' argument on this point is not persuasive.

9. *The Applicants' argument,* see the Response page 8, III. Claims 5, 12 and 19 with respect to the rejections of claims 5, 12 and 19 under no statutory basis, have been fully considered and the Examiner notices that there was a typographical error (See paragraph 6 of the Office Action mailed on 17th of September 2003), such that the statutory basis for the claims 5, 12 and 19 were not indicated in the paragraph 6's header. However, the Office Action, page 6, clearly shows that the claims 5, 12 and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Berglund in view of Sidhu, and the status of the claims 5, 12 and 19 rejections is under 35 U.S.C. 103(a) as being unpatentable over Berglund in view of Sidhu.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E. Lee whose telephone number is 703-305-5950. The examiner can normally be reached on 9:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Christopher E. Lee
Examiner
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